REMARKS

This Amendment is fully responsive to the non-final Office Action dated September 21, 2007, issued in connection with the above-identified application. Claims 1-12 were previously pending in the application. With this Amendment, claims 2-4 and 7-12 have been canceled without prejudice or disclaimer to the subject matter therein. Additionally, claims 1, 5 and 6 have been amended, and claim 13 has been added. Accordingly, claims 1, 5, 6 and 13 are all the claims presently pending in the application. No new matter has been introduced by the amendments made to the claims or new claim 13. Thus, favorable reconsideration is respectfully requested.

In the Office Action, the Examiner has reminded the Applicants that proper language and format are required for the abstract. To facilitate the Examiner's reconsideration of the application, the Applicants have provided a replacement abstract. The changes to the abstract include numerous editorial and clarifying changes. No new matter has been added by the replacement abstract.

In the Office Action, claims 1-12 have been rejected under 35 USC 103(a) as being unpatentable over Ding et al. (U.S. Patent No. 5,699,361, hereafter "Ding") in view of Ignatius et al. (U.S. Patent No. 6,418,478, hereafter "Ignatius").

The Applicants have canceled claims 2-4 and 7-12 rendering the rejection to those claims moot. Additionally, the Applicants have amended independent claim 1 to further distinguish the present invention from the cited prior art.

Claim 1 recites, in relevant part, the following:

"A data transmission/reception apparatus for performing a data transfer by a pipeline technique between a predetermined number of processing sections, each processing section being capable of performing a data process and the predetermined number of processing sections being two or more, said apparatus comprising:

a predetermined number of intermediary sections for interconnecting a first data processing section and a second data processing section and allowing data processed by the first data processing section to be transmitted to the second data processing section, the first data processing section and second data processing section being adjoining data processing sections,

and said predetermined number of intermediary sections being smaller by one than the predetermined number of processing sections, ..., and

wherein said intermediary sections generate a data queue for retaining data to be transferred when both the first data processing section and the second data processing section are the active processing sections, and said intermediary sections do not generate the data queue when either the first data processing section or the second data processing section is the passive processing section."

In the Office Action, the Examiner relied on Ding in view of Ignatius for disclosing the features of claim 1. Specifically, the Examiner relied on Ding for disclosing all the features of claim 1, except for a data transmission/reception apparatus for performing a data transfer by a pipeline technique. However, the Examiner relied on Ignatius for overcoming this deficiency in Ding, and disclosing a data transmission/reception apparatus for performing a data transfer by a pipeline technique.

The Applicants maintain that Ding in view of Ignatius fails to disclose or suggest all the features of the claim 1, as amended. Specifically, Ding in view of Ignatius fails to disclose or suggest at least intermediary sections that generate a data queue for retaining data to be transferred when both the first data processing section and the second data processing section are the active processing sections, and intermediary sections that do not generate the data queue when either the first data processing section or the second data processing section is the passive processing section, as in claim 1 (as amended). That is, Ding in view of Ignatius fails to disclose or suggest the generation of a data queue based on whether an intermediary section is an active or passive device.

Ding discloses a host computer that transmits packets and cells of multimedia data in a communication network. In the Office Action, the Examiner relied on Ding at col. 17, lines 23-45 for disclosing an intermediary section that generates a data queue. However, Ding at col. 17, lines 23-45 actually discloses a transmit queue 334-1 in which a datagram descriptor is placed. As described in Ding, if a packet to be transmitted on a channel has a replaceable access mode attribute value, the datagram descriptor in the transmit queue 334-1 is de-queued and discarded. On the other hand, if the packet to be transmitted on the channel has a non-replaceable access

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mode attribute value, then the datagram descriptor is not de-queued.

Thus, in Ding, whether the access mode attribute value is replaceable or non-replaceable (resulting in a datagram descriptor being de-queued of not) is based on the type of data to be transmitted (see e.g., col. 14, lines 10-44). In other words, the type of data to be transmitted is determined at the time of data packet transmission, and then a determination is made as to whether the datagram descriptor for a data packet is to be de-queued.

Conversely, in claim 1, intermediary sections generate a data queue for retaining data to be transferred <u>when both the first data processing section and the second data processing section are active processing sections,</u> and do not generate the data queue when <u>either the first data processing section or the second data processing section is a passive processing section.</u> Ding is silent with regard to determining to de-queue a datagram descriptor based on whether a data processing device in the network is active or passive.

Additionally, in the Office Action, the Examiner relied on col. 15, lines 12-30 of Ding for disclosing the use of "active and passive processing devices." However, col. 15, lines 12-30 merely describes that "in response to receiving a request to allocate channels, the real-time scheduler process 320 determines if there is sufficient resources to accommodate the request." Ding at col. 15, lines 12-30 does not disclose that the allocation of channels is based on a determination of whether a processing device in the network is active or passive.

Thus, Ding fails to disclose or suggest <u>intermediary sections that generate a data queue for retaining data to be transferred when both the first data processing section and the second data processing section are the active processing sections, and intermediary sections that do not generate the data queue when either the first data processing section or the second data processing section is the passive processing section,</u> as in claim 1 (as amended).

Moreover, Ignatius fails to overcome the deficiencies noted above in Ding. That is, Ignatius also fails to disclose or suggest <u>intermediary sections that generate a data queue for retaining data to be transferred when both the first data processing section and the second data processing section are the active processing sections, and intermediary sections that do not generate the data queue when either the first data processing section or the second data processing section is the passive processing section,</u> as in claim 1 (as amended).

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Accordingly, no obvious modification or combination of Ding in view of Ignatius would result in, or otherwise render obvious independent claim 1. Accordingly, independent claim 1 is patentably distinguished over the cited prior art. Dependent claims 5 and 6 are patentably distinguished over the cited prior art based at least on their dependency from independent claim 1. Additionally, new independent claim 13 is believed to be patentably distinguished over the cited prior art for similar reasons noted above for claim 1.

Moreover, the Applicants maintain that dependent claims 5 and 6 are patentably distinguishable over the cited prior art on their own merit for the reasons noted below.

As amended, claim 5 recites that "the transmission section in the first data processing section executes a transmission request in a common mode irrespective of whether the second data processing section is the active processing section or the passive processing section; and the reception section included in the second data processing section executes a reception request in a common mode irrespective of whether the first data processing section is the active processing section or the passive processing section."

The Applicants maintain that the features of claim 5 (as amended) are not disclosed or suggested by Ding in view of Ignatius. In the Office Action, the Examiner relied on Ding at col. 16, lines 60-67 for disclosing the features of claim 5. Ding at col. 16, lines 60-67 discloses that a streamer process 330 determines if the transmission queue is full in association with a specified channel. As described in Ding, if the transmission queue is not full, the streamer process 330 will process the data into the packet. However, nothing in col. 16, lines 60-67 of Ding discloses that the processing of data is performed in a common mode, or based on whether a data processing device is active or passive. Additionally, Ignatius fails to overcome the deficiencies noted above in Ding.

Thus, Ding in view of Ignatius fails to disclose or suggest <u>a transmission section in a first data processing section that executes a transmission request in a common mode irrespective of whether a second data processing section is the active processing section or the passive processing section; and a reception section included in the second data processing section that executes a reception request in a common mode irrespective of whether the first data processing section is the active processing section or the passive processing section</u>, as in claim 5 (as

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amended).

Accordingly, no obvious modification to or combination of Ding in view of Ignatius would result in, or otherwise render obvious claim 5. Accordingly, claim 5 is patentably distinguished over the cited prior art on its own merit.

As amended, claim 6 recites that "the predetermined number of intermediary sections is equal to or greater than two, and the predetermined number of intermediary sections performs an identical function."

In the Office Action, the Examiner relied on Ding at col. 18, lines 34-54 for disclosing the features of claim 6. Ding at col. 18, lines 34-54 appears to describe in detail the elements or features in Fig. 7. According to Fig. 7 of Ding, I/O ports 122 provided to a host are attached to the data communication network for performing data communications with other hosts. However, Ding is silent with regard to whether hosts in the communications network have the same data queues, or perform the same or an identical function. Thus, this indicates that the installation and testing of the data queues in Ding would need to be performed on a host-by-host basis. Conversely, claim 6 of the present invention describes that the predetermined number of intermediary sections perform an identical function. Thus, in the present invention, communication among the data processing sections can be performed using a common intermediary section; thereby reducing program size, program cost and the program testing.

Further, Ignatius fails to overcome the deficiencies noted above in Ding. Thus, Ding in view of Ignatius fails to disclose or suggest a predetermined number of intermediary sections equal to or greater than two, which performs an identical function, as in claim 6 (as amended). Accordingly, no obvious modification or combination of Ding in view of Ignatius would result in, or otherwise render obvious claim 6. For this reason, claim 6 is patentably distinguished over the cited prior art on its own merit.

Based on the foregoing, the Applicants respectfully submit that all the pending claims are patentable over the prior art of record. Thus, the Applicants respectfully request that the Examiner withdraw the rejections presented in the Office Action dated September 21, 2007, and pass the application to issue.

The Examiner is invited to contact the undersigned attorney by telephone to resolve any

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remaining issues.

Respectfully submitted,

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